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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,012	09/26/2003	Gundrala D. Goud	42P17242	7681

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EXAMINER

WANG, ALBERT C

ART UNIT	PAPER NUMBER
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2115

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/672,012

Applicant(s)

GOUD ET AL.

Examiner

Albert Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/03</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Original claims 1-29 are pending.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7-12 and 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 20 recite the limitation "the processor system execute". There is insufficient antecedent basis for this limitation in the claim. Claims 8-12 and 21 & 22 respectively depend on claims 7 and 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyamoto et al., U.S. Pub. No. 2006/0031668 ("Miyamoto").

As per claim 1, Miyamoto teaches a method, comprising:

receiving a plurality of data packets by a processing system via a network during a pre-boot runtime of the processing system, each of the plurality of data packets

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containing one of a corresponding plurality of data segments (par. 0021, data packets are inherently sent over digital networks; pars. 0035 & 0036);

parsing the plurality of data packets using a network protocol stack to extract the plurality of data segments during the pre-boot runtime, a portion of the network protocol stack executed in a hardware entity of the processing system (pars. 0062 & 0065-0067); and

transferring the plurality of data segments into system memory of the processing system during the pre-boot runtime (pars. 0036 & 0037, software to be executed is stored in system memory).

As per claim 14, since Miyamoto teaches the method of claim 1, Miyamoto teaches the claimed the machine-accessible medium.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-8, 13, 15-20 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamoto as applied to claims 1 and 14 above, and further in view of Boyd et al., U.S. Pub. No. 2004/0049600 ("Boyd").

As per 3, while Miyamoto does not expressly teach using TCP/IP protocol, Miyamoto does teach offloading other protocols (par. 0064). Boyd teaches offloading TCP/IP to hardware (par. 0007). At the time of the invention, it would have been

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obvious to one of ordinary skill in the art that offloading TCP/IP is applicable to Miyamoto's method as a means to free processor resources (Boyd, par. 0006).

As per claim 4, Boyd teaches using a TCP/IP Offload Engine (par. 0007).

As per claim 2, Boyd teaches transferring data segments directly into system memory via RDMA (par. 0007).

As per claim 5, Miyamoto teaches executing UDP/IP in the hardware entity (par. 0062)

As per claim 6, Boyd teaches pre-posting a buffer in the system memory of the processing system prior to receiving a first one of the plurality of data segments, the buffer having a size corresponding to a data block (pars. 0113 & 0114).

As per claim 7, Miyamoto teaches a boot agent and a boot image (pars. 0036 & 0037)

As per claim 8, Miyamoto teaches the boot image comprises an operating system for executing on the processing system (pars. 0036 & 0037).

As per claim 13, Miyamoto teaches a network interface card (par. 0062). Boyd teaches an offload engine on an I/O adapter (pars. 0036, 0044 & 0054).

As per claims 15-20, since Miyamoto/Boyd teaches the method of claims 2-8 and 13, Miyamoto teaches the claimed machine-accessible medium.

As per claim 23, Miyamoto teaches a processing system, comprising:

a processor to execute an operating system and application software (par. 0062, processor);

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system memory communicatively coupled to the processor (par. 0062, memory);
a communication link communicatively coupled to the system memory and to couple to a network, the communication link including network protocol software to implement a portion of a network protocol stack (par. 0062, network card); and

a flash memory unit communicatively coupled to the processor, the flash memory unit having stored therein a first pre-boot application to request transfer of a first data block from the network into the system memory, the first pre-boot application to interact with the network protocol software to initiate transfer of the first data block during a pre-boot runtime of the processing system (par. 0006, flash memory alternative; par. 0062 & 0065-0067, boot ROM with PXE routine; par. 0035 & 0036).

However, Miyamoto does not expressly the network protocol software being executed by an offload engine. Boyd teaches an offload engine on an I/O adapter to implement a network protocol stack (pars. 0007, 0036, 0044 & 0054). At the time of the invention, it would have been obvious to one of ordinary skill in the art that offload engines similar to Boyd's are applicable to Miyamoto's system as a means to free processor resources (Boyd, par. 0006).

As per claim 24, Boyd teaches using a TCP/IP Offload Engine (par. 0007).

As per claim 25, Boyd teaches providing RDMA to transfer data directly into system memory (par. 0007).

As per claim 26, Boyd teaches pre-posting a buffer in the system memory having a size corresponding to the data block prior to initiating transfer of the first data block (pars. 0113-0114).

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As per claim 27, Miyamoto teaches an extensible firmware interface driver executed during a pre-boot runtime of the processing system (pars. 0036 & 0046).

As per claim 28, Miyamoto teaches processing system may be any type of computer or server (par. 0020). A processing blade to be mounted in a blade server chassis is a well known form of server.

As per claim 29, Miyamoto teaches the first pre-boot application is to request transfer of the first data block including a boot agent and a boot image, the boot image including an operating system (pars. 0036 & 0037).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW

A handwritten signature in black ink, appearing to read 'Chun Cao', is positioned above the printed name.

CHUN CAO
PRIMARY EXAMINER